REMARKS

Claims 1-10 are currently pending and at issue.

Claims 1-10 stand rejected as being unpatentable under 35 U.S.C. §103 over Ito (JP 57-73392) in view of Simpelaar (U.S. 2,657,018). The rejection is improper and should be withdrawn as the Office Action either mischaracterizes the cited references or misunderstands the present claims.

Specifically, claim 1 recites a multi-pass heat exchanger including at least one multiple port tubes defining three hydraulically separate flow paths. The heat exchanger also includes an inlet manifold on one end of the tube(s) and an outlet manifold on an opposite end of said tube(s). The Office Action first refers to Figure 5 of Ito as showing the recited structure. However, referring to Figure 5, it is readily apparent that the inlet manifold and outlet manifolds are not located on opposite ends of the tubes. In fact, they are located as approximately the same location relative to the tubes.

The Office Action later alleges that in Figure 1, Ito discloses the above recited structure. Again, this is not the case. Claim 1 recites "at least three hydraulically separate flow paths..." This structure simply is not shown in Figure 1 of Ito. Assuming *arguendo* that Figure 1 of Ito shows the inlet and outlet manifolds on opposite ends of the tube, it is plainly obvious that the figure also depicts only one flow path and not at least three as recited in claim 1. Ito specifically distinguishes

between the structure where only one flow path is utilized and when three flow paths are utilized with each structure being unique and not interchangeable. Simpelaar adds nothing in this regard. Accordingly, the references relied on, taken alone or together, fail to show or suggest the structure recited in the claims. Therefore, for this reason alone, the rejection of claim 1 and its dependent claims is improper should be withdrawn.

Independent claims 9 and 10 recite similar structure. Therefore, for analogous reasons to those presented above with respect to claim 1, the rejection of claims 9 and 10 is also improper and should be withdrawn.

Additionally, claim 1 recites that the cross sectional area of one of the flow paths is greater than the cross sectional area of another of the flow paths, and as stated above, claim 1 also recites that the heat exchanger includes at least three hydraulically separate flow paths. The Office Action alleges that Ito discloses the cross sectional area of one of the flow paths (17A) is greater than another of the flow paths (17B), as shown in Figure 10. However, referring to Figure 10 of Ito, it is clear that there are only two flow paths, and not at least three as recited in claim 1. Ito does show three flow paths, in Figure 6, yet those three flow paths all have equal cross sectional areas. Subsequently, Ito should be understood as disclosing three flow paths having equal cross sectional areas OR two flow paths having one larger and one smaller cross sectional area, neither of which is what is recited in claim 1.

Simpelaar again adds nothing in this regard. Accordingly, the references relied on, taken alone or together, fail to show or suggest the structure recited in the claims. Therefore, for this additional reason alone, the rejection of claim 1 and dependent claims 2-8 is improper and should be withdrawn.

Independent claim 10 recites similar structure such that of the three hydraulically separate flow paths, the cross sectional area of one flow path is different from the cross sectional area of another of the flow paths. Again, Ito discloses three flow paths all having equal cross sectional areas. Therefore, for similar reasons presented above, the rejection of claim 10 is improper and should be withdrawn.

Claim 1 also recites a baffle in the outlet manifold separating the another flow path and one of the other of said flow paths from the remaining flow path(s). This structure is also not disclosed or suggested in either of Ito or Simpelaar taken alone or together. As plainly seen in Figure 5 of Ito, the outlet manifold 14 does not have any baffle structure. Ito merely discloses the outlet manifold 14 separate and distinct from the inlet manifold 13. As the two manifolds are separate, there can be no baffle in the outlet separating the flow paths as recited in claim 1. Furthermore, because of the location of the outlet manifold in Ito, there would be no reason to include a baffle as it would serve no purpose. Therefore, for this additional reason, the rejection of claim 1 and dependent claims 2-8 is improper and should be withdrawn.

Independent claims 9 and 10 recite similar structure, a baffle in the outlet manifold. For similar reasons as those presented above with respect to claims 1-8, the rejection of claims 9 and 10 is also improper and should be withdrawn.

Claim 1 also recites a partition extending both longitudinally and transversely within the inlet manifold. The Examiner correctly admits that this structure is not shown in Ito. To overcome this deficiency, the Office Action attempts to combine Ito with Simpelaar. The Office Action alleges that it would have been obvious to combine the two references with the motivation to "more easily provide a longer flow path and thus increase the heat transfer." This analysis is improper in view of the respective disclosures in the two references. In fact, there is no motivation to make the alleged combination. Specifically, Simpelaar discloses a rather complex manifold for both the inlet and the outlet in a single structure whereas Ito discloses a rather simple two manifold design that does not require complicated manufacturing or assembly. In view of this, there is no factual support for the assertion in the rejection that Simpelaar would " **more easily provide**" a longer flow path. Rather, it is the unmodified version of Ito that "more easily provides" such structure.

Furthermore, the structure of Simpelaar is unnecessary and would serve no purpose if combined with the structure of Ito. Ito discloses an inlet manifold that distributes a single flow in two directions away from the manifold. There would be

no reason to have a partition to separate one flow path from the inlet while connecting another flow path with at least one other flow path, as recited in claim 1. The structure in Ito would not utilize the alleged partitioned structure of Simpelaar as the flow directions in Ito are very simple and to not require connecting multiple flow paths separate from one flow path. Therefore, for this additional reason, the rejection of claim 1 and dependent claims 2-8 is improper and should be withdrawn.

Additionally, the modification of Ito by Simpelaar would be contrary to the Office Action's assertion that Ito has manifolds on the opposite ends of the tubes. Specifically, Simpelaar discloses a single structure including both an inlet and an outlet manifold. If Simpelaar's structure were combined with the structure of Ito, the inlet and outlet manifolds would be required to be located at the same position on the tubes and not on opposite ends as recited in the claims. Therefore, for this additional reason, the rejection of claim 1 and dependent claims 2-8 is improper and should be withdrawn.

Claim 9 recites the same structure as described above. Claim 10 recites similar structure to that described above. Therefore, for analogous reasons, the rejection of claims 9 and 10 is also improper and should be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration of the rejection of the claims and allowance of the case.

Respectfully submitted,

WOOD, PHILLIPS, KATZ,
CLARK & MORTIMER

By _____
Jeffery N. Fairchild
Reg. No. 37,825

November 7, 2005

500 West Madison Street
Suite 3800
Chicago, IL 60661-2511
(312) 876-1800